

## CLAIMS:

1. An apparatus for vaporizing fuel for supply to an engine comprising:
  - a container having a first and second chamber;
  - 5 a fuel injection nozzle for injecting fuel from a fuel injection pump into the first chamber;
  - a heating plate provided in the container and dividing the first and second chambers such that the heating plate forms a wall of each of the first and second chambers;
  - 10 the fuel injection nozzle and the heating plate being arranged such that the fuel engages against the heating plate for heating the fuel in the first chamber to form vapour therefrom;
  - an outlet duct for supplying vapour from the first chamber to the engine;
  - 15 a heating liquid within the second chamber and engaging the heating plate for supplying heat to the heating plate;
  - and an electrical heating element within the second chamber for supplying heat to the heating liquid.
2. The apparatus according to Claim 1 wherein the heating plate is  
20 at the bottom of the first chamber and the top of the second chamber.
3. The apparatus according to Claim 1 wherein the fuel injection nozzle is arranged in the first chamber so as to direct the fuel onto the heating plate.

4. The apparatus according to Claim 1 wherein the fuel injection nozzle is in a top wall of the first chamber.

5. The apparatus according to Claim 1 wherein there is provided a heat sensor in the second chamber for detecting the temperature of the liquid.

5 6. The apparatus according to Claim 1 wherein there is provided a vapour pressure sensor in the first chamber for operating the fuel injection pump when the pressure falls below a required minimum.

7. The apparatus according to Claim 1 wherein there is provided a vapour pressure sensor in the first chamber for shutting down the system when the  
10 pressure falls rises an allowed maximum.